

REMARKS/ARGUMENTS

1.) Claim Amendments

Claims 1-21 have been amended to more particularly point out and distinctly claim the subject matter that Applicant regards as the invention, and claims 22-24 have been cancelled; no new matter has been added. Claims 1-21 remain pending in the application.

2.) Priority

The Examiner acknowledged the Applicant's claim for foreign priority based on SE-9802059-7, filed June 10, 1998, but indicated that a certified copy of the priority document had not been filed. The Applicant has previously requested a certified copy of the priority document but has not received it as of this date. The Applicant will submit the certified copy of the priority document upon receipt.

3.) Examiner Objection – Drawings

The Examiner objected to Figures 1-3 as not including a prior art legend. In response, the Applicant submits herewith formal replacement sheets for Figures 1-3, each now including a prior art legend.

4.) Examiner Objections – Specification

The Examiner objected to the abstract of the disclosure as not defining the acronym “FFT” in lines 7 and 10. The Applicant submits herewith an amended abstract as suggested by the Examiner.

The Examiner objected to specific claims references within the specification. The paragraph noted by the Examiner has been deleted as specified in the amendments to the specification herein.

5.) Examiner Objections - Claims

The Examiner objected to claims 3, 8, 14, 19, 22 and 23 for various informalities. The Applicant has amended claims 3, 8, 14, 19 to address the Examiner's objections,

substantially as suggested by the Examiner, and cancelled claims 22 and 23. The Examiner's consideration of the amended claims is respectfully requested.

6.) Claim Rejections – 35 U.S.C. §112

The Examiner rejected claims 1-22 as being indefinite, citing specific portions of claims 1, 10, 11, 23 and 24. The Applicant has amended claims 1, 10 and 11 to correct the antecedent basis issues noted by the Examiner, and cancelled claims 23 and 24. The Examiner's consideration of the amended claims is respectfully requested.

7.) Claim Rejections – 35 U.S.C. §103(a)

The Examiner rejected claims 1, 2, 4, 12, 13, 15 and 22 as being unpatentable over Williams, *et al.* (US 5,886,749) in view of Liu, *et al.* (US 5,671,168). The Applicant has cancelled claim 22, but traverses the rejection of claims 1, 2, 4, 12, 13 and 15.

With respect to the rejection of claim 1, the Examiner first looks to the teachings of Williams. The Examiner points to various portions of Williams as allegedly disclosing elements recited in claim 1, but recognizes the deficiency of Williams in teaching the selection of Fourier transform bins around center frequency. To overcome this deficiency, the Examiner looks to the teachings of Liu. Even if Liu taught what Williams fails to, however, the claimed invention would not be obvious in view of those references.

Williams teaches the use of FFT based filtering for equalization. In contrast, Liu is directed to beamforming, and uses different weighting factors for beamforming differently at different frequencies. No selection of a channel comprising a range of frequency samples is done; rather, it is a per-antenna pure filtering operation. Liu then uses time domain interpolation by zero-padding in the frequency domain. The Examiner has misinterpreted the meaning of the frequency domain weighting factors employed by Liu; since the data streams that have been multiplied with the weighting factors are brought together in the IFFT, no channel selection has been performed. In other words, it is a pure frequency domain beamforming technique. Thus, there is no teaching, much less a suggestion, in either Williams or Liu to combine their teachings to arrive at the

claimed invention. Therefore, the Examiner has failed to establish a *prima facie* case of obviousness of claim 1. Whereas claim 12 recites limitations analogous to those of claim 1, the Examiner has also failed to establish a *prima facie* case of obviousness of claim 12. Furthermore, whereas claims 2 and 4 are dependent from claim 1 and claims 13 and 15 are dependent from claim 12, and include the limitations of their respective base claims, those claims are also not obvious over Williams in view of Liu.

8.) **Miscellaneous**

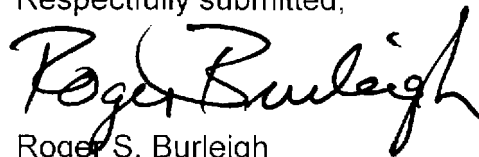
Although the Office Action Summary indicates that claims 1-24 were rejected, the Applicant notes that no specific rejections were made with respect to claims 3, 5-9, 14 or 16-21, although some of those claims were objected to. The Applicant respectfully requests that the Examiner clearly indicate the status of all claims in subsequent Office Actions, if any.

CONCLUSION

In view of the foregoing amendments and remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 1-21.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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